

论文与报告

专家式控制参数实时自学习算法(LARGE)

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摘要

本文通过更深刻和贴切地模拟专家整定控制参数的启发式过程,开发了一种高级的专家式控制参数实时自学习算法.首先解决了如何从序贯采集进来的被各种噪声和扰动污染了的控制偏差数据中识别出瞬态过程的模式、抽取其特征的问题,然后解决了如何将反映了基本反馈控制系统各种特性的瞬态过程特征映射为能进一步改善其性能的控制参数的问题.

关键词 [实时模式识别](#) [实时产生式系统](#) [框架表达](#) [控制器自整定](#) [叠代学习](#)

分类号

Real-Time Expert Self-Learning Algorithm for Regulator Gains (Large)

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Abstract

By means of more detailed and faithful simulation of the heuristic process where the expert assign the regulator gains, an advanced real-time expert-like self-learning algorithm has been developed. The first problem solved is how to recognize the pattern of a transient process and extract its features from sequentially sampled regulation error data corrupted by various noises and disturbances. The second is how to map those features which reflect various properties of the essential feedback regulation system onto the regulator gains for further improvement of its performances.

Key words [Real-time pattern recognition](#) [real-time production systems](#) [frame representation](#) [regulator self-settling](#) [repetitive learning](#)

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